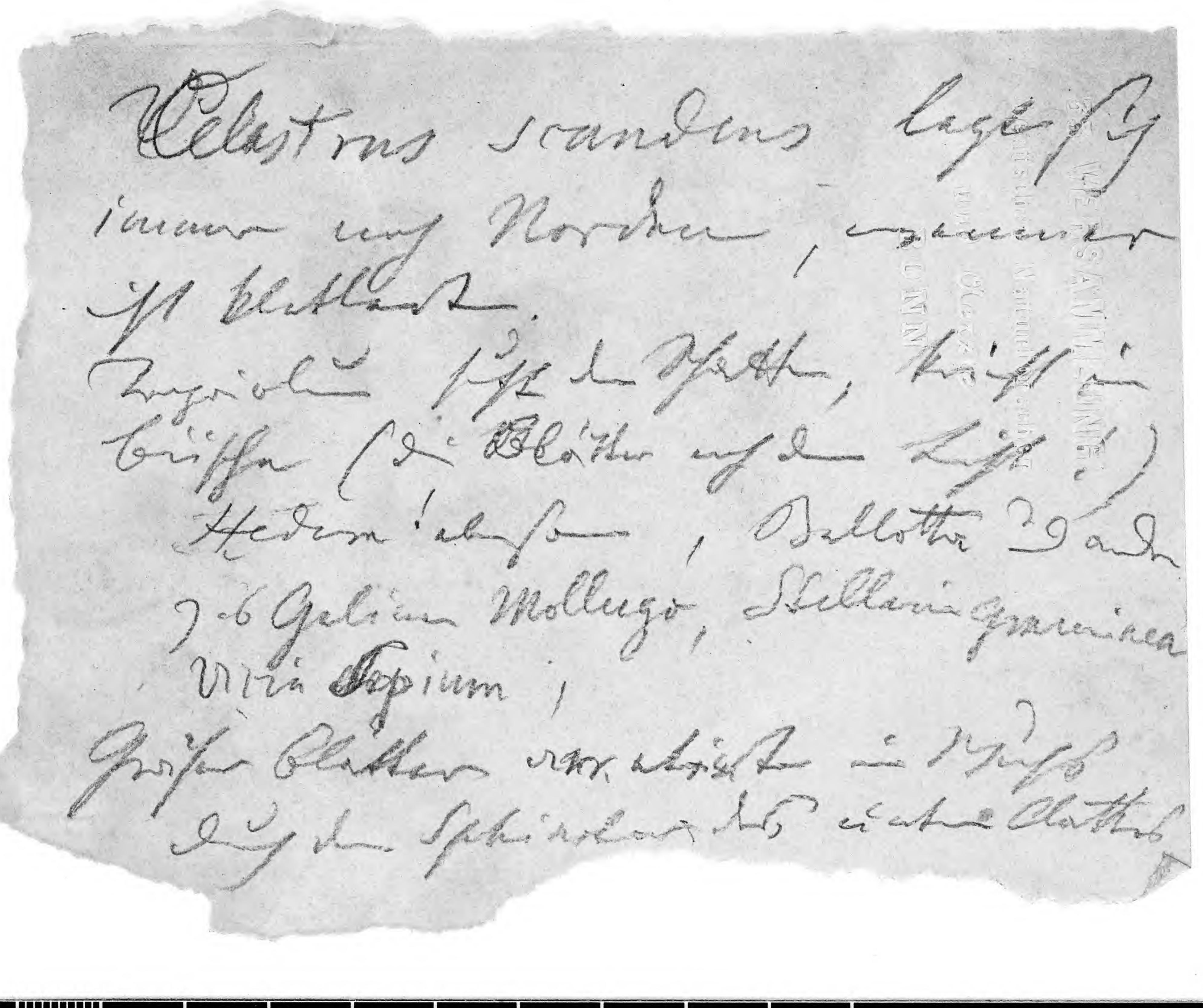
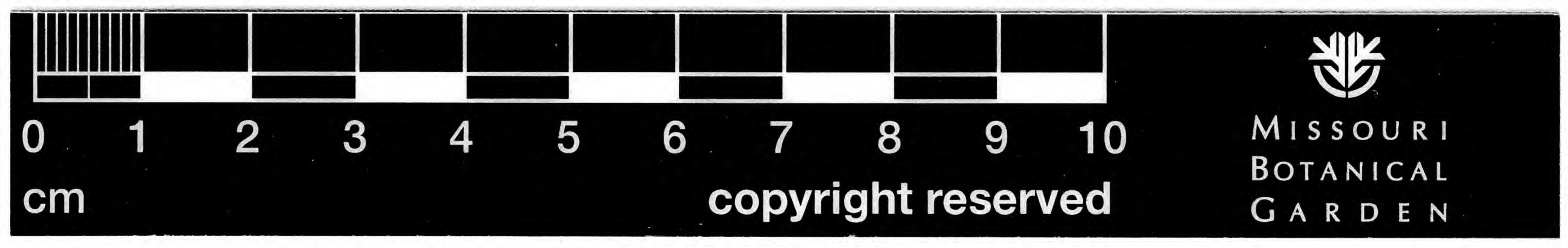
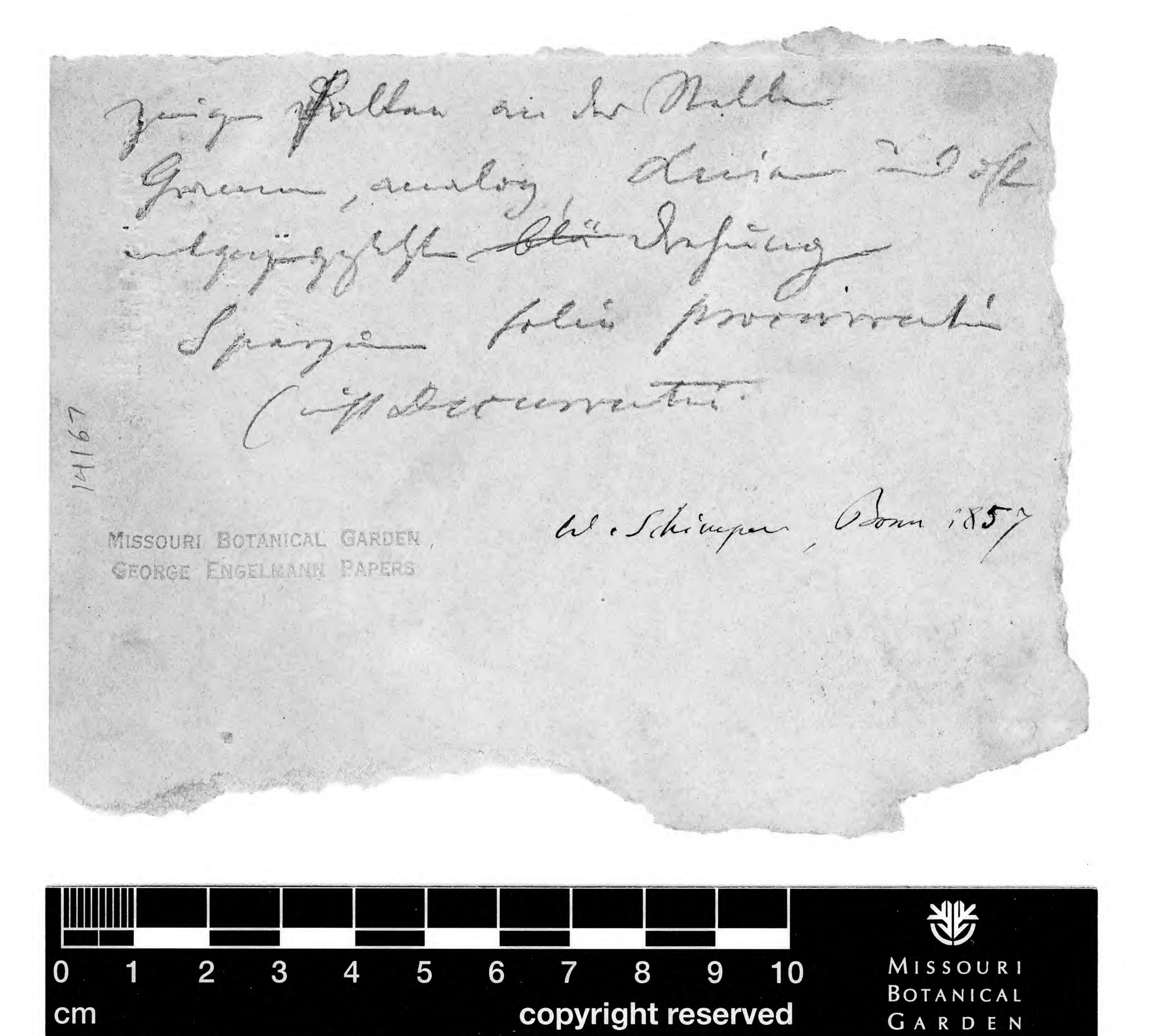


Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.







Combridge och 3 1990 Sachs Botany they. W. Let 20 delitropism . The part of the flower grows will in permant Jak um i Cyll; most internades grows lower in fell light, and carre to the light if it comes from our tibe - lest it Periodicity of growth in length course by the alternation of day & night. sunshire the growth is ortand, higher temperature promotes it, and greater moisture lines transpirition. They the lines become monthery if and growth is promote Examples grune e.g. - Mts, Curartita Surglissing show what 5 f p. C. growth by dry and 48 p. Cal right - front influence (weren) greater the - as many morning hours = 100 to 10 or 80 x Horden - Scot 19 Effect of Temperature or growth. Tribirum germinatus et 5°C Curatiti de 13° Ben mais de 9° C germinets land et 28-33° and not after the temperature has attend 42.34 or 46° C. Though a higher temperature bes not Kill them yet, but they will germinets, if the temperature is browned! pits and Gordered pits of the word wells of Pinns 10 0000 00 min radial section Throng mature

Throng mature

Con Sporting stricture of the red wall most clearly san in hairs of Operation it large pricherals of the root talons of Deblie - bestrells of Aprogramme (more) There of collwells sometimes soulls up i rate I built the the outer wall abording a their wantings with more water (liane, griare - him of Amelia ded, persong of Solvie) or becoming through the stem forms gam (Astroples Frage with)





Just Ishorsberickt 1879 I.I. p. 89 Herry Mulifiely de figur (#289 Jupes mature) Hartig Unterschertungsmerkmale der archigere - Rochen 1879 Hartig: A. Conferons woods a. Restricts absort in the wood 1. No heartwood Abis pertination 2 heartwood present Taxus bernte, Zunipers Virginian, J. Communing

B. Renistrate disting 1. No hastord fire extelsa 2. heartwood developed x duhumul layer bood and soled and very district from spiriglager
Potent sylventris Linitio, montain Lange lumpeer

XX atumal layer narrow, not grally listent for spiriglager,

R. R. R. St. See 1. Combre, Shober. a Vessels on the inner Christ of the annual rings very large (ring-porous Decolon word & versels outsire of The Pore-critic equally scallend Fortines excelsion, Carya, Morres alle, Robinia Bell. Gledithis himself Cityper Rub. Astanthes gladuloze XX Versels outsite of the pore-circle united to commethed where sometimes branching undalated times; Ulmay effects, montain subing XXX Vessels outsite ofthe fore or the in Tart Theper groups is prilamangent, and sometimes milly branched t medullary rays partially very large, mostly very smile denot itorisible queros ++ mes. my reamly visible Container 111 all med. my vong Broad Mi, Berbeni, Aosa 8. Prosels on the inner limit of the nancel migs not larger but much more numerous thereby producing a lighter colored Cooser textuns vermel band & meddling rays district, vessels in the annuel layer equally sistrict Human drawestor, anheld, lader, avien - Samberer nign XX Merallang my scarrely visible; heartwood drepty colound Aheann calletin , frangede, Oher hyptiste, Chair, Tyrings . C. Dressels on the inner limit of the annual rings not layer or more numerous, woods without spring vernal pore-rings. *. Hora same bet my lange Jugland regul 2. stry small and surhat. & numerous board med lang rays Hatimers XX jome very Grond med rays with namery very small sandy visible rays; no shellar spots Tayon Carpiness Grylers XXX The felse broad med rays mostly whithat. Her true smallong only it to radie section is the money brown medallary yout, Alma, stutskou, incana XXXX all med mys equal, Nother but small Aver Phudoplatas platanoides campethre Tilis Hexagnife XXXXX Mid. nys not orible + hard woods lives coma. hales Contages Organell Solber aurapani, tominalis, Ana Betuli alle Conynes Europ. Buxus securion ten It Sept woods Alsonlers, Popular tremela alle nigna balsami Jen. Saling Capour cinera, alle fregilis perhanden. Molisch sugs the Wood of Chancere shows humification and dow carbonstation has also numerous constate of Spalate of line it the med lang mys de the day wood the vends contain i Soyryros MISSOURI

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N8. Thelesperma, Less. (Omin nipped, strésua, sud, from the présence the Rusky Minutains, and one in the Bampas South of Assar 2 il smooth and glahms; with appoints more fruely dissected leaves, and community Showy slender peringulate hears; the mays golden gellen Joisk-flowers gellen er krun igh. _ d'una. vi, su; Gray fin Ken Jone. Bot. 1, 252, & Ol. Might. 1.10g M. Overmidium, Jon. Long in hull, Frans. Mr. ohie, Avel, f.c. 361, of Fre, 11. 350. A St Throat of Disk-doubles campan ulate, Shorter Shanf the line ar or lancertate likes; the style-appendages with eusmidste a subulate tip: babbres, x GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10 MISSOURI BOTANICAL GARDEN

Schrimpeniana 1888 all deithous trees file Confesors trees have thicken layers of have thicken layer, of wood on the upper side wood on the lower side of their branches, on of their branches, or in other was are exacting ei other word; are ex antit epants. ei a verghigh degree Calleina. The original auguler steen of which es eitte restange la on obligaely should to Exaplian (xonto Aher, Catelje, Chedra Stapple Crica

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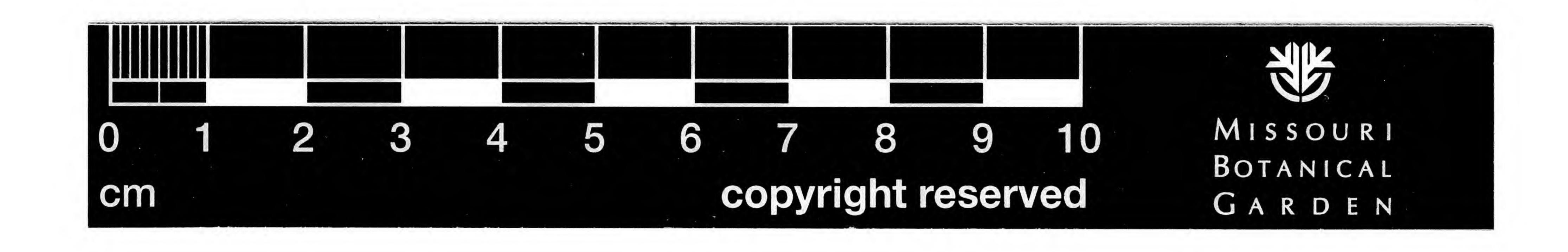
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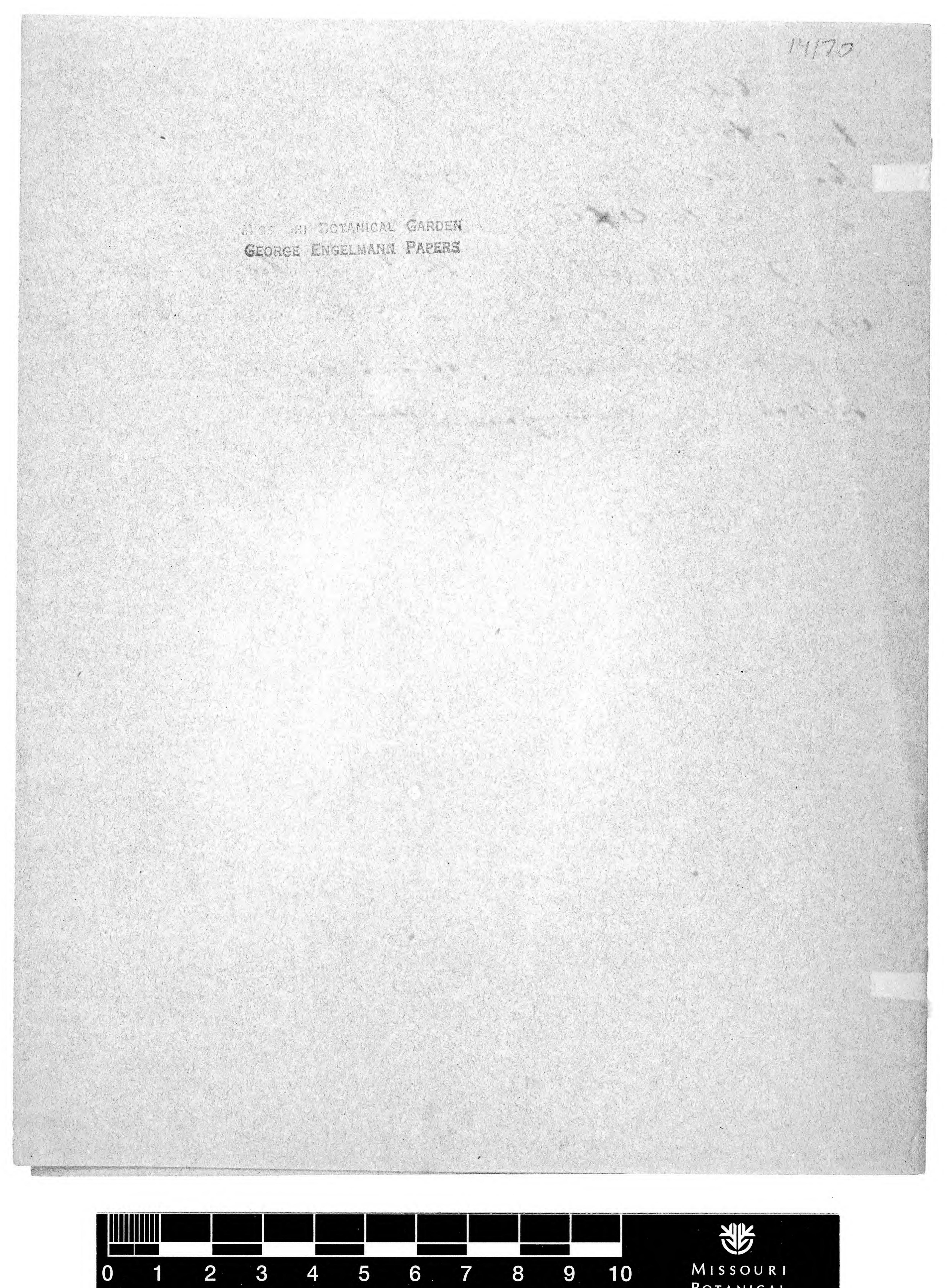
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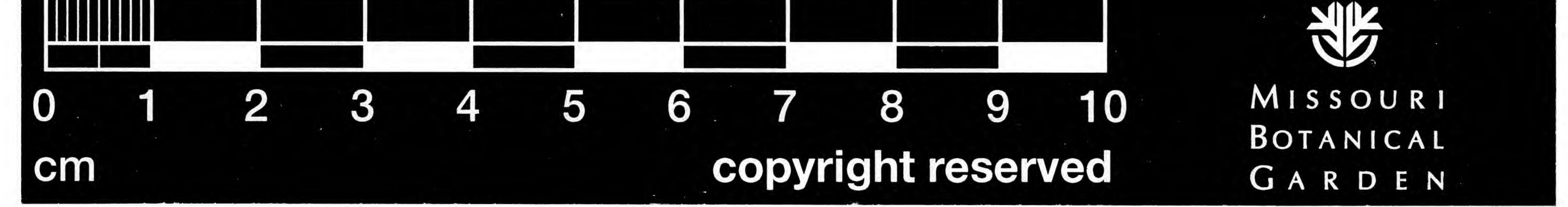
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Mus Cotions is one of the few if not the only true or themby the horizontel branches of total have their leaves regularly amanged and the append 2 all the others, the leaf turns the To that they amen more on less a Listichon, amangement.







Burkarts Sannhung der wirkligtster Enopueische Mit hoefer in chandwishischen Schnitter (von 7.M Podang ni Wien. Øssinn 1880. Udlag om W. Bushart Setro destain, Storet une of Word Tarenchyma spaning; brood fibres (Libriform) sbandet and forming the man of the wood. Some wood fibres grow in length & with and else : Thickness of well, offen the Trus verse walls which I vide a perpending series of them, kieffer , forming by taker, the vessels or viscolar organs, The vends are oven in the oven seiter as porces Which are either southered in the wood or comanged in Groups and in restricio di victoria, Donal ad Autual part of the Unnuel ring Tracheides & versels usually over to getter (especially the former in autumnel wood) I Conferen wood the persols as well as the dignerous febres av absect; in Their place Brokeides with wordsted date an formed. Resident lit Conferme Mahellang Rays, radictions from the meddle. They some Fines (Burn, Juguer) an ford by single rows of cells and are then invisible to the naked eye annual migg sometime, in vissble or not Bresent This last sing many Import woods. In then lust Here are often false sings visible, then lest are not continues around the whole wood and off give it a netted appearance Saparood, Mature wood (Reif-hol) and heartwood (Kernholy)





His exolen colours food between reddish & pellowish white, between reddish & pellowish white, besture of the course, slight residons of residents distinguishe is from Abies pectite meddlery may on the intide (innen) with simple pores, onlyide (on the upper as lover many in of the and may) with small arcolated tapfel. No hash wood, but making we then as & Man.

Density- Jaide proport - Shriking - Solling (Juellen) - Elastirity
and tensority - hardness - Splitting - Generality (in air - wity)

Mses

Mice petisate, colour weder what to gellowit white _or while no det start reshour oder. la nindet, in wood, Mestan cood let no headwood - Sap wide; Madada or pith only 1.5 - Man Thick angular brown medulary verys visible only under the gen, composed of conform cells extent arcolated det. Annual rings of differ orith, distinct etc. Larry European Separad of Difert with, yellowsh Shit, headwood modernom shraing. Madelley rogs offer 3-4 seriel 13-4 series of odls probably); outer odls like there of the Price , resin-cards more numeron, and distint. Middle very small, and virgs firely wad lat. Tiam dylocation Sapwood rogewite (25-80 mings) yellowith to volkish alute; heartwood after exposure brownish and, frymet; autaunt al vernel part of mugs very ditinct. The executive character of the executive character of the executive consists in the 2-fold cells of the Med. M. rays; i amenony with large (arcolated), dots, extensor ones with zickgachen thickening. It autual wood principally necessary resin Late. The very fin a animorous med. mys visible only with the Glass

terror months and the second of the second o



Pians audien similar to P. Sqlouting say very Hist. broad rings with red autum word, Olesin offen very about I Them. I. Cembra sap yellowish abit, heart rud brown, frynd, Annual sings very uniform; and well fact narrow, gradually charges to the vernal wood, therefore the knewl sings not very Istably muched. Medulley my veg slight, of one on sevel lagers of cells, inner olls with large perfected det, the outer with small woolsto dots. numeron somall vesidett, viible und the flew, near the enteume asos. W. Storting day broad yellowish shet, hard wood nedsish geller to veddich brown; otherwise sincilar to Coubre Capressen fastigiale White or pole gellowith brown , I hat it off. per. arometrie, nings distinct, meddle ray, eeen ett the glan, quite narrover, sometimes opirally striped. The inner I outer medelling. cells with numerous pores. Junipens Communis Sep gellowish, head gellowish town, Toman Estevin of annual rings wavy notorous ; pleasant fragmence Madellang vrys visible only by the I of the flow numerous, equi distant. No resindents. Medelle cells unform, on the app I bower alze of the rays with ourse numerous dots . The brukeity of Sumpen, Coprency and Lakery were smaller the three of Phan alkanix datus baroute das very narrow gelowth white; had wood villigh - Brown , with fine this Sale restown Thise from the narrow rings



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1

not arometri. Med. mgs vs.ible only lighter of a gless. Frankeids narrow, much thickened, now in the yearing wood, charactering ly a brown find band, Such overlys the anolated Ist. Resinduts and wood-pavenchyma are about formis pedemontale & semiliflon langue pores itte vernel wood formis a very strict mays; broad shing medally rays & light brown colour. Mums smiller pover group it teit shaped groups become smaller towards the westermand wood, Besides the broader med. mys namer our, off touts, are visible. Head crowd, Castances vessea similate Oak wood, Istingwild by the obsence of the broad med-rays. Med. my namons (1-cell-series) only visible erth the glass Jagus sylvation from for depte mature wood & hand and so grade that the lovets we along oblitanted, Amuel rings Islingwill by the decker autumned wood. The may of higher with the naked eye isolated, irregularly scattered, in the author wood I mallan. Their trossource valls oblitanted or putially precessed Principal Principal Mud. mys 1-15 series of all, thick, Man of and consity of much thickens libriform with aredated det, little parent Selig Capoen & Popular tremala While Jap vods the Malun wood, light brown heart I Ammel mings mitter it; trust but pores and then mys not wisible wither an glass the lates very this way namerous, the former smiller is the central part of the ving



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Silantus glandlosa bond pith, zellowish sap, orangecoloured heart; hadlary mys will make to stright. annual rings plain; under the Glan light ool 2 posits in the (5-8 largers of alls)
autumnel wood, Bester the Grondy Med. mys many Minte oney Alen wary. The Vessels have small dots (Tapfel); the smaller vinds have spiral inevenent. Libripone much Thickened Aver campestro, Bendoplalann, platanoidy All day word, no hart distring wishable (all Burgue maple, an "splint-holger") almost white annul rings additioned,
"ned vays Astracty shining. Frads my soul, still smeller in The autummel wood - southers, with Ist and many with spiral thicken. Kaxinus excelsión sap bond, white, miture word, a board ring of pores in the Vernel word. Medall ones foly seen begglan, also light rolound off Francisca spots Mountly 2-3 visil, are graped to gether and I der wounded by parenchyma fine grined, rings, module rays of mittered pory only vis ible with the glass. In the vernal word versels numerous, grouped in visit likes, with row arcolate dots, sometimes with file Sprint Ches.



MISSOURI BOTANICAL GARDEN GEORGE ENGELMANN PAPERS MISSOURI BOTANICAL copyright reserved cm GARDEN Tilin francipolis superod Boad white, sedish white mature wood; annul my as medellar rays (1-3 rand, -5 senis feels) Sothat, light points, especially in spring wood seen with a glass.

Vends in groups or resial likes without mud dots (Dupple) and spirit bead. Carandyma in Armover under letel series of single sells

0 1 2 3 4 5 6 7 8 9 10

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